Pisobia minutilla. Least Sandpiper.— This species was recorded but once, on July 21, when several were seen.

Pelidna alpina sakhalina. Red-backed Sandpiper.— Appeared Sept. 24 and straggled along until Oct. 27, never more than two or three being seen together.

Ereunetes pusillus. Semipalmated Sandpiper.— First seen July 21; was more or less common until Sept. 16; last seen Sept. 23.

Calidris leucophæa. Sanderling.— A flock of five on Aug. 18 was the first appearance of this species. Sept. 15 and 16 it was fairly common, and was last seen Sept. 24.

Totanus melanoleucus. Greater Yellow-legs.— Appeared Oct. 12 and 13 when five were seen. A flock of seven on Oct. 17 is the only other record.

Totanus flavipes. Yellow-legs.— A single individual seen Aug. 1; a flock of seven on Sept. 15 and 16; and five on Sept. 23 are the only records.

Helodromas solitarius. Solitary Sandpiper.— Ordinarily a fairly common visitant, but only one specimen was recorded, Sept. 16.

Actitis macularia. Spotted Sandpiper.— A rather common summer resident; it was last seen Sept. 16.

Squatarola squatarola. Black-bellied Plover.— First seen Sept. 3; a few scattering individuals then seen until Sept. 25.

Charadrius dominicus. Golden Plover.— One individual taken Oct. 27 constitutes the only record for this species.

Oxyechus vociferus. Killdeer.— On July 25, a flock of about 75 appeared. They continued common until Sept. 16 when the majority were frightened away. From the 16th of Sept. to Oct. 20 scattering flocks of from 3 to 50 appeared, so that they were never entirely absent from the beaches. The last record was made Oct. 27.

Ægialitis semipalmata. Semipalmated Plover.— First appeared July 23; common until the 16th of September; a last straggler Nov. 3. This bird was poor in flesh and had probably been wounded.

Arenaria interpres. Turnstone.— On Sept. 15, three of this maritime species were seen running along the sand beaches, prying under shells, bark and bits of water plant in their characteristic manner. One was collected the following day in the same place.

Most of these records were not made in time to be included in the recent paper by Reed and Wright on 'The Vertebrates of the Cayuga Lake Basin, N. Y.' and hence we have the occasion of their presentation at this time.

It might be well in this connection to mention also the capture of a Yellow Rail (*Coturnicops noveboracensis*) at Ithaca, Nov. 3, and an immature King Eider (*Somateria spectabilis*) at the north end of the Lake (Cayuga), Nov. 26 by Mr. J. T. Lloyd.— Arthur A. Allen, *Ithaca, N. Y.*

Top-White on Mammals and Birds.— This is one of the points in our book (Concealing-Coloration) upon which some naturalists have not yet understood us. They have not read us carefully, and take our pictures

for mere illustrations of a theory. In every case, however, the picture *proves* the optical fact, and also shows the reader how he may for *himself* prove it out-of-doors, if he will carefully follow directions.

Take, for instance, our Figs. 114–115, which show photographs of a white card against a dark background and against the sky. In Fig. 115 the card is brightly conspicuous; in Fig. 114 it has *vanished from its place*, merely because it was photographed from *two feet lower down*. Surely naturalists must realize that the visible card makes a certain impression on the mind, while that in Fig. 114 makes no impression at all, unless I call their attention to the fact that it is really there although invisible.

I can prove to them in many ways that the case of an antelope's white stern-patch is subject to the same laws. *Men have always been of a stature that made them apt to see the deer's or antelope's white brightly defined against the ground*,— and whenever the animal displayed it from a higher ridge so that it had the *sky* behind it, it was nearly or quite invisible to them, and so made little or no impression on their minds.

We will assume, however, that man's eyes, being normally five or six feet above the plain, commonly perceive this white when it is displayed within their field of vision. But coyotes', wolves', and cougars' eyes are all *below* the level of this rear-patch, and just as commonly see it against the *sky* as man sees it against the ground. Beyond all dispute it is exactly the color *not* to show to the eyes of any of these predators. Equally wrong-colored is it for the sight of the fawn (so often said to have it for a guide), as well as for the adults when their heads are down in the act of grazing. How can naturalists believe that nature would give this 'signal' a color that failed to succor the most helpless members of the wearer's race, the young? *If any naturalist will once look at such white from the fawn's level in the night*,[1] he will see the absurdity of the old conception.

We all agree that whenever the antelope flashes this mark it *is* a sign of alarm. If it is, it must serve as a warning *to all antelopes that see it*, exactly as naturalists now believe. It must put all the antelopes that see it on the alert. There are, however, a number of other forms of signalling that obviously outrank it in serviceability. This white rear is, even when seen against the ground, only visible from *one* direction. The upraised head of an antelope watchful and sniffing stands almost as high again, and against the sky always shows dark, while its gesture always betrays to kindred animals its emotion. So must the characteristic

[1] The experimenter will find that even out in the open field it is only when the white surface faces more or less upward that it gets enough illumination to be as bright as the sky and becomes indistinguishable. Whenever the sky is partly hidden by trees the white gets too little light to match it. But while it often fails to be *bright enough* to disappear, practically never anywhere in the night is it *too* bright. It is at the moment when the white rear of the antelope, deer, or hare faces most *upward*, at the highest part of his leap, and when his head is descending, that the best 'obliteration' comes.

alarm-sounds of the species. While the high head *shows from all directions*, and nearly twice as far, and in the open always dark against bright sky, this famous 'blazon' is never in sight but from one direction at a time, and even from there no fawn or any member of the herd that chances to have its head lowered as in grazing will often see it against anything but sky. Add to this that the signal only tells of danger perceived by the signaller, and generally concerning *him* the most. Lastly, this discussion is all about *day-time* signalling, and these ruminants are then in their least danger.

Now I beg attention once more to what I believe to be the cardinal use of this white. At night, when these animals are stalked, the stalker as we all believe, creeps as *low* as possible (presumably so as not to show against the sky). The nearer he gets the surer is the deer's first bound to bring his rear-white against the sky. In short, to get near enough to seize the deer or antelope means for the predator to be so situated that the white patch (like one's hand held before one's eyes, which though only four inches wide covers the entire landscape) blots out the whole deer, putting in his place an imitation of sky.

Nothing but actual personal experimenting such as I myself have done will bring home this wonderful fact to naturalists. No more miraculous safety-provision could be dreamt of. And if it is the magical thing I show it to be, and always comes into play at the animal's life-and-death moments, could it fail to come into automatic operation whenever the slightest stimulus to fear reached the animal's brain? Does there remain any ground whatever to consider that it exists *for* signalling?

It will soon be perceived that the world of terrestrial animals, both mammals and birds, are furnished with this top-white in very apparent proportion to their need of not showing against the sky:— grubbing predatory mammals and ground-feeding predatory birds having it in front, and the rest wearing it behind, exactly where it does them the same *obliterative* service that it does the antelope.

Tennis players know that they play their best game while the balls are clean and show white against the dark ground. And the same principle is observed by 'squash' players, who reverse the thing — using dark balls against a light background. How could these close-lying animals that must bound away at the last moment fail to develop a coloration that made them the worst of targets for their stalkers? Surely it is what most *directly* saves their lives that is of the very most account to them. Abbott H. Thayer, *Monadnock, N. H.*